



# Volcanoes and Earthquakes



## Mountains

### Fold Mountains



Two plates push into each other (converge) and the plates start to push upwards.

### Fault Block



Two plates converge but rather than the pressure pushing the mountain upwards, a section breaks at weak points and that entire section is forced upwards.

### Dome Mountains



Magma from the mantle pushes its way up through the crust without erupting at the surface. It then pushes the layers of rock upwards. The magma cools and becomes solid rock.

## Volcanoes

### Formation



Volcanoes generally form on the boundaries of the tectonic plates. Tectonic plates can move apart from each other (diverge) leaving a space for magma to erupt. If plates converge, one plate is forced underneath the other, leaving space for magma to spill out.

### Ring of Fire



The Ring of Fire is a major area around the Pacific Ocean where many earthquakes and volcanic eruptions occur. It is a large 40,000km horseshoe shape with 452 different volcanoes along it!

## Earthquakes

### Formation



When tectonic plates move parallel to each other it causes friction that sticks them together. When they get unstuck, it can cause a violent jolt which causes an earthquake.

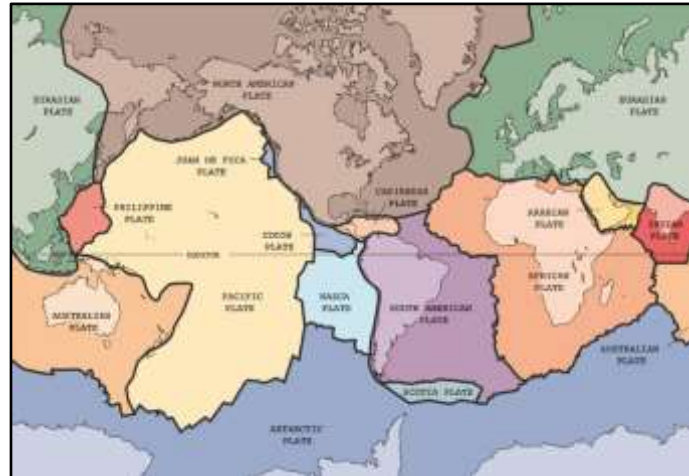
### Magnitudes



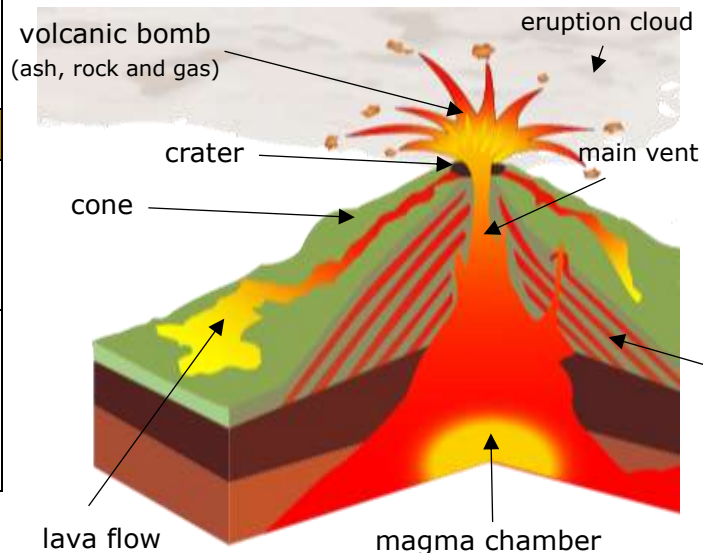
Shockwaves spread out from the epicentre (the strongest point of the earthquake). Magnitude, measured on a Richter scale, measures how strong an earthquake is. 1 is a small tremor and 9 is catastrophic!

## Plate Tectonics

The part of the land that is moving in the Earth's crust is called the lithosphere. The lithosphere is made up of the Earth's crust and a part of the upper mantle. It moves in big chunks of land called tectonic plates. Some of these plates are huge and cover entire continents. They are around 62 miles thick and the movement of these help with the creation of mountains, volcanoes and earthquakes. They move between 1cm-10cm per year.



## Inside a Volcano

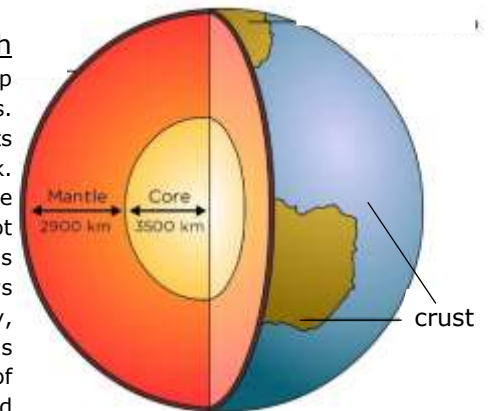


## Key Vocabulary

crust	the outer layer of the Earth made up of plates
mantle	below the crust and made up of molten rock
core	centre of earth with a temperature of about 6000°C
tectonic plates	massive plate of solid rock on the Earth's crust
magma	molten rock when inside the Earth
lava	molten rock when it has erupted out of the crust

## Inside Earth

Earth is made up of three sections. The crust consists of solid rock. Below this is the mantle, so hot that the rock has melted and flows like liquid. Finally, the core which is a hotter ball of iron and nickel.



## Tallest Mountains

